

Notice of Allowability

Application No.

09/804,396

Examiner

Betsy L. Deppe

Applicant(s)

KANEKO ET AL.

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 22 July 2004.
2. ☒ The allowed claim(s) is/are 1-7.
3. ☒ The drawings filed on 22 July 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 29 July 2004
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 20041021.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Louis Woo on October 20, 2004.

2. The application has been amended as follows:

- a. in claim 6, line 20, change "fourth" to --said second--;
- b. in claim 6, line 23, delete "second";
- c. in claim 6, line 24, change "fifth" to --said third--;
- d. in claim 6, line 25, change "fourth" to --second--;
- e. in claim 6, line 30, change "sixth" to --fourth--;
- f. in claim 6, lines 21, change "signal" to --signals--;
- g. in claim 7, lines 11 and 15, after the first occurrence of "of" insert --a plurality of--; and
- h. in claim 7, lines 17-18, replace "the second subcarriers being equal in frequency to the first subcarriers respectively and being different in polarity from the first subcarriers" with --wherein each second subcarrier is equal in frequency

to a respective first subcarriers and is different in polarity from the respective first subcarrier--.

3. The following is an examiner's statement of reasons for allowance:

with regard to claims 1-3 and 5, prior art of record does not teach or suggests in combination a method of generating a transmission signal wherein determined non-compensation points correspond to OFDM subcarriers having positive and negative angular frequencies and the compensation signal points corresponding to OFDM subcarriers having positive angular frequencies and negative angular frequencies are in a predetermined relation, as recited in claims 1 and 5;

with regard to claims 4 and 7, prior art of record does not teach or suggests in combination a method of generating a transmission signal that comprises determining first and second compensation points for first and second subcarriers, respectively, wherein the second subcarrier is equal in frequency to the first subcarrier and is different in polarity from the first subcarrier; and

with regard to claim 6, prior art of record does not teach or suggests in combination an apparatus for generating a transmission signal in an OFDM system wherein predetermined signal points are separated into groups including a first group corresponding to a first subcarrier and a second group corresponding to a second subcarrier.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Although the following references disclose OFDM systems with mapping circuits: Vijayan et al. (US Patent No. 6,151,296) and Hampel et al. (US Patent No. 6,442,211 B1), they do not disclose the particular relationship between the subcarriers and signal points recited in the claims and indicated as allowable subject matter in the paragraph above.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betsy L. Deppe whose telephone number is (571) 272-3054. The examiner can normally be reached on Monday, Wednesday and Thursday (8:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272 - 2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Betsy L. Deppe
Primary Examiner
Art Unit 2637